Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_

**Chemical Nomenclature with Polyatomic Ions**

*Problem Set #2*

**CRISS-CROSS!!!**

|  |  |  |
| --- | --- | --- |
| **Name** | **Polyatomic Ion(s)?** | **Chemical Formula** |
| Lithium nitride | ☐ Yes  ☐ No |  |
| Sodium sulfate | ☐ Yes  ☐ No |  |
| Strontium carbonate | ☐ Yes  ☐ No |  |
| Aluminum phosphate | ☐ Yes  ☐ No |  |

|  |  |  |
| --- | --- | --- |
| **Chemical Formula** | **Polyatomic Ion(s)?** | **Name** |
| RbC2H3O2 | ☐ Yes  ☐ No |  |
| Be(CN)2 | ☐ Yes  ☐ No |  |
| Na3PO4 | ☐ Yes  ☐ No |  |
| Ba(ClO3)2 | ☐ Yes  ☐ No |  |

Write the names of the following compounds.

|  |  |  |  |
| --- | --- | --- | --- |
| Formula | Name | Formula | Name |
| CaCO3 |  | Cs2CO3 |  |
| AlPO4 |  | RbC2H3O2 |  |
| KHCO3 |  | Be(CN)2 |  |
| NaClO2 |  | Na3PO4 |  |
| FrOH |  | Ba(ClO3)2 |  |

Write the formulas for the following compounds.

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Formula  (criss-cross) | Name | Formula  (criss-cross) |
| magnesium hydroxide |  | calcium carbonate |  |
| aluminum nitrate |  | ammonium phosphate |  |
| lithium sulfate |  | barium hydroxide |  |
| sodium bicarbonate |  | magnesium nitrite |  |

Naming Covalent Compounds

1. Write the names of the following covalent compounds.

1. CO2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. N7Cl8 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. NBr3\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. H2O2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Write the chemical formulas of the following covalent compounds.

1. Tetraphosphorus heptafluoride \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Pentasulfur nonahydride \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Tricarbon octachloride \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Naming Ionic Compounds

1. Write the names of the following ionic compounds.

1. MgBr2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. FrBr \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Li2O \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Write the chemical formulas of the following ionic compounds.

1. Sodium nitride \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Potassium phosphide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Barium sulfide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Calcium bromide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Potassium chloride \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_